

Saddleback Ridge Wind, LLC // Natural Resource Protection Act (NRPA) and Site Location of Development Act applications

- October 4, 2011 letter to Mark Margerum re: objections to draft order

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October 4, 2011

Mark Margerum, Project Manger
Maine Department of Environmental Protection
17 State House Station
28 Tyson Drive
Augusta, ME 04333

*Re: Saddleback Ridge Wind Project (the "Project")
L-25137-24-A-N, L-25137-TG-B-N (Draft)*

Dear Mark:

On behalf of Friends of Maine's Mountains ("FMM") and the individual residents who will be affected by the Project who requested a public hearing (the "Aggrieved Parties"), I am objecting to the Draft Order in this case. For purposes of this objection, I am incorporating by reference my December 10, 2010 letter to Eric Ham requesting a public hearing (with supporting materials), excerpts (by reference) from the rulemaking record before the Board of Environmental Protection (the "'BEP") in connection with the citizens initiated proposed Noise Rule Amendments, the provisionally adopted Noise Rule Amendments approved by the Board of Environmental Protection (the "'BEP") on September 15, 2011, and other exhibits listed below.

I. Objections to the Draft Order as to Noise.

The Amended Noise Report submitted by Resource Systems Group, Inc. ("RSG") on March 17, 2011, accepted by the Maine Department of Environmental Protection (the "DEP") in the Draft Order, reveals that the Project does not have a sufficient margin of safety to protect

residents living near the Project from excessive noise and the adverse health effects and diminished property values associated with excessive noise. Table A4 and Figure 19 of the Revised Noise Report reveal that there are 9 non-participating residences bordering the Project which will experience noise at or above 43 dBA. The DEP should not approve a Project with this noise exposure.

A. Constitutional Objections to the Draft Order.

The individual Aggrieved Parties have a Property Interest in their residences and a Liberty Interest in their health protected by the Due Process Clause of the Maine and United States Constitutions. The Draft Order, if finalized, will violate the Due Process rights of the individual Aggrieved Parties who requested but were denied the opportunity for an adjudicatory hearing on the subject of excessive noise. In addition, the Due Process Clause includes a substantive component that bars arbitrary, wrongful government actions regardless of the fairness of the procedures used to implement them. The approval of the Project as proposed by the Draft Order represents a deliberate indifference to the Liberty Interests of the individual Aggrieved Parties of being free from exposure to excessive noise affecting their health and well-being and a deliberate indifference to their Property Interests of being free from action that wrongfully reduces their property values, all in violation of Substantive Due Process.

The premise for the Liberty Interest objections based adverse health effects are addressed further below. The premise for the Property Interest objections start with the proposition that when a protected location stands in the way of licensing of a wind energy development because of the noise limits, the developer purchases a noise easement or purchases the property itself. We know of no project that has failed to obtain licensing because of the need for the developer to acquire property or easements on property because of noise considerations.

The problem arises for adjacent property owners living just beyond the nighttime noise limits, such as in the Saddleback Ridge Project, is that property values can be seriously diminished by reason of the proximity to the proposed Project, as shown in reports like the June 8, 2010 Report of McCann Appraisal, LLC for Adams County Illinois and the September 2009, Wind Turbine Impact Study by Appraisal Group One. Because the developer is under no obligation to compensate adjacent landowners if the noise limits are not exceeded, nearby residents are forced, against their will, to subsidize the wind energy project. This is wrong and any order by the DEP that allows this to happen violates both the procedural and substantive Due Process rights of the individual Aggrieved Parties in the circumstances of this case. Studies have shown that wind turbine noise can have a serious negative impact on the values of nearby residences.

B. Objections to the Draft Order Based on Modeling.

The objections of the Aggrieved Parties to the modeling predictions of noise for the proposed Project were addressed in the December 10, 2010 letter to Eric Ham and the accompanying report of Richard James of E-Coustic Solutions dated December 9, 2010. The Aggrieved Parties objections are further contained in the supplemental Report of Richard James dated October 4, 2011 attached hereto and incorporated herein by reference.

In addition to those objections, incorporated herein by reference, the Aggrieved Parties object that the noise modeling by RSG is not designed to represent the "predictable worst case" impact on adjacent properties to the proposed Project because it does not model sound sources operating during nighttime stable atmospheric conditions with high wind shear above the boundary layer and other conditions that may affect in-flow airstream turbulence. The requirement for such modeling is contained in Section I(7)(c) of the provisionally adopted Noise Rule Amendments. The Aggrieved Parties recognize, of course, that the proposed Noise Rule

Amendments have not been finally adopted and that, even if they were, they would not technically apply to projects in the process of being licensed. Nevertheless, the proposed Noise Rule Amendments represent the best and latest judgment of the BEP on the subject following a public hearing and consideration of expert testimony and reports.

The modified Noise Report excluded consideration of high wind shear and other sources of in-flow airstream turbulence. If these factors had been modeled under a "predictable worst case" scenario, the risk that the Project would propagate noise in excess of the existing Noise Rule would prevent the project from being approved because of SDRS. As explained in FMM's submissions in the rulemaking proceedings, amplitude modulation is a common complaint by those residing near wind projects that makes wind turbine noise more annoying than other forms of industrial noise. In focusing on this feature of noise, the BEP recognized that the existing Noise Rule does not adequately protect against amplitude modulation because the threshold of peak to valley in the existing Noise Rule definition of SDRS is too high, and because the penalty for SDRS is not properly designed to protect against amplitude modulation. See Section I(4) of the provisional adopted Noise Rule Amendments. With the benefit of these insights, the DEP should require applicants to be more conservative in the modeling of projects for SDRS, which has not occurred here.

In addition, even with the change to quieter blades, the modified Noise Report continues to rely on noise reduced operations ("NRO") for 2 turbines in order for the modeling to comply with the existing Noise Rule limits for nighttime noise of 45 dBA. The Aggrieved Parties object to the use of NRO in modeling to meet the Noise Rule sound limitations because there has not been an adequate demonstration that NRO reduced power levels will prevent excessive noise when wind turbines are operating in turbulent conditions. Also we object to NRO in modeling

because NRO is the first measure used for mitigation in response to excessive noise experienced in actual operations. There is a limit to how much NRO can be used because it maxes out at NRO 4. Therefore, by using NRO to meet the Noise Rule at the licensing stage, a wind power developer limits its ability to use NRO later, once a project begins operations, as a mitigation tool.

C. Objections to the Draft Order Based on the Absence of Consideration of Blade Feathering.

Apparently General Electric has developed Low Noise Trailing Edge Technology consisting of the placement of serrated fins along the trailing edge of turbine blades designed to reduce sound levels by 2-4 dBA. See the Minor Revision to the Fox Islands Wind LLC and Petitjean, et als, "Wind Turbine Blade Noise Mitigation technology," 4th International Meeting on Wind Turbine Noise (April 2011). If this technology is available for the kind of GE turbines used in this Project, the DEP should require their use to create a larger margin of safety against excessive noise. Neither the Noise Reports nor the Draft Order addresses this issue. The Aggrieved Parties object to the Draft Order on these grounds.

D. Objections to the Draft Order Based on Health Concerns.

As noted above, 9 of the receiver points in the modified Noise Report are predicted to experience noise from the proposed Project during nighttime operations at or exceeding 43 dBA. Under the provisionally adopted Noise Rule Amendments, these noise levels would be considered excessive based on maximum nighttime limits of 42 dBA. Again, we recognize that the provisionally adopted Noise Rule Amendments do not apply to this Project, but the BEP adopted these limits provisionally based on the latest health based reports and studies. As explained in the Basis Statement in the provisionally adopted Noise Rule Amendment, "[t]his rule takes into account the increased knowledge concerning noise generated by wind turbine

development since the [original] rule was adopted” and that it is intended to “protect the environment and existing uses of the areas surrounding the developments.” The Supplemental Basis Statement and Response to Comments prepared for the September 15 BEP meeting further commented at 6- 7 that:

The available data demonstrates that persons living near existing wind energy developments with actual sound level measurements near 45 dBA as at Vinalhaven are experiencing adverse effects. A decrease in the sound level limit from 45 dBA to 42 dBA hourly average nighttime limit should be a perceptible difference in sound level and as protective as the WHO annual night noise guideline.

Accordingly, the DEP should take the health based limits of the provisionally adopted Noise Rule Amendments into consideration as authorized by Section 10E. of the existing Noise Rule. We have progressed beyond the point that the DEP should routinely approve wind development projects modeled at 45 dBA without consideration of the health effects of doing so based on the tired arguments of wind developers that have not withstood scrutiny.

The Aggrieved Parties’ December 10, 2010 filing with the DEP in support of a public hearing addressed this issue at pages 13-16. The studies included in that filing included the Affidavit of Michael Nissenbaum, concluding that 14 of the receptor sites at the Saddleback Ridge Project would experience adverse health effects from the Project, including sleep disturbance and adverse health effects caused by sleep disturbance and other receptor sites would be exposed to an unknown quantity of risk of adverse health effects. Dr. Nissenbaum also presented to the BEP in the rulemaking hearing for the Noise Rule Amendments giving further support for the exposure to adverse health effects for residents adjoining wind projects at distances like those documented for Saddleback Ridge in the modified Noise Report. In addition, since the rulemaking hearings, Dr. Nissenbaum’s study of Mars Hill and Vinalhaven for health risks for those adjacent to wind turbine projects has been published. *See*, M. Nissenbaum, J.

Aramini, and C. Hanning, “Adverse health Effects of Industrial Wind Turbines: A Preliminary Report, 10th International Conference of Public Health Problem (2011)”. This paper reports on the “first controlled study of the effects of IWT noise on sleep and health, show[ing] that those living within 1.4 km of IWT have suffered sleep disruption which is sufficiently severe as to affect their daytime functioning and mental health.” *Id.* at 4.

In the Draft Order at 10, references are made to the testimony of Dr. Dora Mills at the July 7, 2011 BEP rulemaking hearing and the October 2009 report of Exponent, Inc. for the Wisconsin Public Service Commission and the December 2009 report prepared by the American Wind Energy Association and the Canadian Wind Energy Association (the “AWEA/CWEA panel”) that wind energy noise does not “directly cause” health problems. This point was completely discredited at the BEP public hearing. Dr. Nissenbaum explained that annoyance is one of the root causes of sleep disturbance and secondary adverse health effects suffered. In other words, wind turbine noise *indirectly* causes adverse health effects if too loud. Nissenbaum’s opinion on indirect effects are supported by the *WHO Guidelines for Nighttime Noise in Europe* (2009), as shown by the chart from WHO reproduced as Exhibit C to Dr. Nissenbaum’s testimony before the BEP. More pointedly, Dr. McCunney, one of the principal authors of the AWEA/CWEA report referenced in the Draft Order, verified at the July 7 BEP hearing what he had earlier testified in Vermont proceedings on the health implications of wind turbine noise. In the Vermont proceedings, Dr. McCunney acknowledged that annoyance from wind turbine noise “may cause recognized medical disorders such as sleep deprivation” and that “health impacts associated with sleep disturbance may be experienced at noise levels below 45 dBA.” At the BEP hearings, he testified that he agreed with Dr. Nissenbaum that “*there is no question*” that annoyance leads to stress which over time leads to sleep disturbances that can

have adverse health effects. He said again, "there is no question that annoyance leads to sleep disturbance", that "sleep disturbance starts at 40 dB." Dr. McCunney also did not question his Vermont testimony that if it were his home, he would want "the noise level [to] be kept below 35 decibels, maybe 40." Consistent with this testimony at the BEP hearing he did not claim the absence of adverse health effects for noise in excess of 40 dBA; he limited his comments about health effects for levels below 40 dBA.

The Draft Order at 10 also cites the AWEA/CWEA report for the proposition that "sounds emitted by wind turbines are not unique." The international professional literature on the subject conclusively establishes the falsity of this statement. *See*, Statement of Position by Petitioners and Friends of Maine's Mountains before the BEP rulemaking proceedings at 2-8. More importantly, the BEP was clear in its deliberations of the provisionally adopted Noise Rule Amendments, as was the DEP itself, that wind turbine noise is different from other kinds of industrial noise and therefore needs focused treatment separate from the regulation of other sources of industrial noise.

The Draft Order at 10 also states that "[a]nnoyance regarding the wind turbines is an elusive factor that could underlie a majority of the health complaints being attributed to wind turbine operations." This is another example of a false assertion discredited at the BEP rulemaking hearings. As Dr. Nissenbaum explained in his testimony before the BEP in the rulemaking proceedings, and as the *WHO Nighttime Guidelines* and the wind industry's medical spokesman, Dr. McCunney confirmed, annoyance is a concept imbedded in research as a cause of sleep disturbance leading to adverse health effects. McCunney testified at the rulemaking hearing::

I agree with the presenters, noise can certainly affect sleep, and certainly if sleep is affected, that can lead to health effects. In fact

in my view there can be a cascade. Annoyance, if protracted, can clearly lead to stress; stress, if protracted, can lead to sleep disturbance; sleep disturbance, if protracted can clearly lead to health problems. There is no question about that

[Emphasis added.] In the peer reviewed article by H. Moeller & C. Pedersen, *Low Frequency Noise From Large Wind Turbines*, 129 J. Acoust. Soc. Am. 3727 (June 2011), an exhibit in the rulemaking proceedings, the author's state at 3734-35:

Pedersen & Wade have shown that around [35 dB] the percentage of highly annoyed persons increases above 5%, and the percentage of annoyed persons increases above 10% [citing a 2009 publication of Pedersen relied upon by Dr. McCunney in his testimony]. Pedersen and Nielsen recommended a minimum distance to neighbors so that wind turbine noise would be below 33-38 dB. A limit of 35 dB is used for wind turbines, e.g., in Sweden for quiet areas. *Thus 35 dB seems as a very reasonable limit for wind turbine noise.* It is also the limit that applies in Denmark in open residential areas (night) and recreational areas (evening, night and weekend for industrial noise (but not for wind turbine noise). [Emphasis added].

Attempts to pass off "annoyance" in its colloquial meaning as an insignificant bother can no longer be regarded as credible in the context of wind turbine noise.

II. Objections to the Draft Order Based on Visual Impact.

A. The Evaluation Criteria for Assessing Visual Impact under the Wind Power Development Act Requires Rulemaking to Create Objective Criteria.

As written, the evaluation criteria for assessing whether a proposed wind energy development project will have an unreasonable adverse effect on the scenic character and existing uses of the area to be developed are too vague to allow anything other than a subjective judgment. 35-A M.R.S.A. §3452.3 calls for evaluation of "the significance of the potentially scenic resource," the "existing character of the surrounding area," the "expectations of typical viewers," the "scope and scale of the potential effect of views", etc. . These are extremely vague standards, so vague that there can be no meaningful review by the judiciary as to whether the

agency, either the DEP or LURC, has fulfilled the legislative purposes of the Wind Power Development Act or has exceeded the bounds of allowable discretion in the licensing of projects.

The DEP's own consultant, James Palmer, made this point in his January 21, 2011, Review of the Saddleback Ridge Wind Project Visual Impact Assessment. At pages 51-2 of his Review, Palmer states that the evaluation criteria are "somewhat ambiguous," which is true if not an understatement. He states that that the "primary authorities should further refine the evaluation so that they are unambiguously understood, accurately applied and usefully interpreted. This should include identifying indicator thresholds that distinguish between Unreasonably Adverse, Adverse, and Not Adverse scenic impacts." The Comments of Alan Stearns, Deputy Director of the Bureau of Parks and Land dated December 9, 2010, are even more direct: "Without comparisons based on precedent, BPL's ability to comment on the 'reasonableness' of scenic impacts is nearly impossible, or in the alternative fully subjective."

Critical and unique scenic resources in this State, significantly defining its identity, are at stake in the process of wind turbine siting. Without rulemaking rendering the broad evaluation criteria specific and objective, the statute is too vague to permit meaningful review, violating the Separation of Powers Clause of the Maine Constitution.

B. The Wind Power Act Creates an Unconstitutional Irrefutable Presumption that only Great Ponds Listed in the Maine's Finest Lake Study is of State Significance.

The visual impact assessment of the Applicant, accepted by the DEP, excludes consideration of the scenic impact of the Project on Webb Lake because Webb Lake is listed in the Maine's Finest Lake study published by the State Planning Office in 1989 and thus is not considered to be a scenic resource of state significance under 35-A M.R.S.A. §3451.9.D for that reason alone. The Finest Lake study, by its own terms is incomplete and not necessarily accurate. At page 29 of the study, the disclaimer is made-- indeed it is stated to be "important to note" --

that the study:

relied heavily on exiting information to rate lake resource features.
Due to the large number of lakes in the state, as well as the relative lack of field surveys on these lakes, it is quite possible that some important features have been overlooked. Because of this, these lake ratings should be regarded as minimal findings.
 [Emphasis added.]

For the Legislature to mandate exclusion of scenic resources based solely on a study done 22 years ago that acknowledges that it is not complete or accurate is so arbitrary and capricious as to be unconstitutional on its face. The statute is also unconstitutional as applied. According to the October 4, 2011, Report of Michael Lawrence attached hereto, Webb Lake should have been on the list if the criteria in the Finest Lake study were properly applied.

C. The Visual Assessment is Deficient because it does not Consider the Visual Impact of the Project by those Using the Mount Blue State Park to Access Webb Lake.

The Applicant's visual impact assessment excludes the impact of the proposed Project for those who use Mount Blue State Park to access Webb Lake on the grounds that Webb Lake is not within the boundaries of the Park and the DEP accepts this view. This limitation on the scope of the visual impact analysis is arbitrary and capricious. It ignores the significance of the Park for one of its most popular features. The brochure for Mount Blue State Park published on the website of the Maine Department of Conservation features water access. It states that:

Mt. Blue State Park is Maine's largest state park, encompassing approximately 8000 acres in two sections separated by Webb Lake. A campground in the Webb Beach section has 136 wooded sites a short walk from a sandy beach and picnic area. Visitors can swim, launch and rent boats, and walk on the trails near the lake. During the summer months, park staff routinely offer canoe trips, walks and nature program.

Given the weight that the Bureau of Parks & Land gives to water access to Webb Lake from the

Park, and further given the fact that scenic impacts are experienced by people not places, the overly technical approach used by the Applicant to scenic impact is wrong as a practical matter.

The limitation of the visual impact assessment excluding the portions of Webb Lake used by those gaining access through the Mount Blue State Park also contradicts the plain wording of the statute. Section 35-A M.R.A. §3452.1 of the Wind Power Act requires an assessment of the effect of a wind power development, not only on the scenic character of a place, but of “*related existing uses*” as well. Indeed the very title of this statute requires “related existing uses” to be assessed: “§3452. Determinations of effect on scenic character and related existing uses.” The body of Section 3452.1 further specifies that the primary siting authority shall determine whether a wind power development project “significantly compromises views from a scenic resource of state or national significance such that the development has an unreasonable adverse effect on the scenic character *or existing uses related to scenic character of the scenic resource of state or national significance.*” [Emphasis added.] The views of those visiting Mount Blue State Park to gain access to Webb Lake are certainly an “existing use related to” Mount Blue State Park. Yet the Applicant’s visual impact assessment excludes consideration of the related uses. Further, in the “evaluation criteria” set forth in Section 3452.3, an applicant is required to take into consideration the “existing character of the surrounding area” of the Park, the “expectations of the typical viewer” using the Park, and the “context of the proposed activity” of a user of the Park. All these criteria mandate consideration of the impact of the Project on a user of Mount Blue, including those who pay the Park a fee to access Webb Lake and who swim in Webb Lake from the Park.

D. The Visual Impact Assessment is Deficient because it does not Address the Scenic Impact of Associated Facilities.

The Wind Power Act requires assessment of the visual impact of, not only the turbines

themselves (the “generating facilities”), but also the elements of the development other than the generating facilities, including roads, cut outs for roads, buildings, generating lead lines and substations. See 35-A M.R.S.A. §3451.1 (definition of “Associated facilities”) and the attached Procedural Orders of the Maine Land Use Regulatory Commission in the Highland Wind case. Under Section 3452.1, the primary siting authority is required to make a determination of the scenic impact of the “development” in terms of whether the impact has an unreasonable adverse effect. The “development” consists of the generating facilities and the associated facilities. Within 30 days of acceptance of the application for a wind project, the DEP is required to make a determination of whether the associated facilities “may” have “unreasonable adverse effects” and, if that determination is made, the stricter review standards that existed before the Wind Power Act apply. In this case, the Applicant never addressed the scenic impact that will result from the construction of the proposed associated facilities, as the DEP’s consultant, James Palmer, points out at page 8 of his Review. Nor are we aware of any determination made by DEP about whether the associated facilities may have an unreasonable adverse impact. The issue is simply not addressed at all by either the DEP or the Applicant. Therefore, the scenic impact assessment made in this case cannot by law be considered adequate. Indeed without any information to judge the impact of the associated facilities, it should be presumed that the impact “may” be unreasonably adverse.

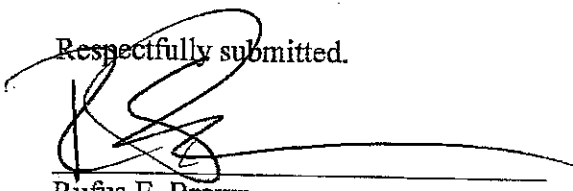
E. The Scenic Impact Analysis is Deficient because it does not Adequately Address Cumulative Effects.

The Wind Power Act does not expressly require a cumulative impact analysis, but the DEP’s consultant correctly opines that such an analysis should be required because of the wording of 35-A M.R.S.A. §3452.3.D (evaluation criteria should include the “context of the proposed activity”). See Palmer, Review at 4 and 52. The Applicant’s visual impact assessment

makes no cumulative impact analysis and, in response to review comments, simply does a mapping overlay of the proposed Project with the Record Hill and Spruce Mountain projects. There is no analysis and not even a mention of the critical issue of the effect of the project on future wind power development projects in the area. This is a critical part of a cumulative impact analysis. See, the United States Environmental Protection Agency's "Consideration of Cumulative Impacts in EPA Review of NEPA Documents," attached hereto. The Mount Blue State Park and the surrounding viewshed is a critically important area of the State to preserve for its outstanding scenic beauty. It deserves more analysis than the Applicant or the DEP has given to it. The significance of the scenic area requires a meaningful cumulative impact analysis. If this Project is approved, as the DEP proposes, the Mount Blue viewshed will be in jeopardy. The DEP should not allow this to happen.

Dated: October 4, 2011

Respectfully submitted.



Rufus E. Brown
*Attorney for Friends of Maine's
Mountains and Other Aggrieved Parties.*

**LIST OF EXHIBITS ATTACHED TO OBJECTIONS OF FMM
AND OTHER AGGRIEVED PARTIES TO THE DRAFT ORDER
IN SADDLEBACK RIDGE
(Revised October 6, 2011)**

1. Excerpts from the BEP Rulemaking Proceeding on Proposed Amendments to the Noise Rule:

From the Parent Directory-- Citizens Petition Exhibits A-F, H-T, and V-Y

From the Prehearing Directory

AR-03 Petitioners Statement of Position

AR-04 James Testimony

AR-05 Nissenbaum Testimony and Exhibits A-F

AR-06 Krogh, et. Al, Adverse Health Effects of Wind Turbines (September 2010)

AR-07 AEI WindFarm Noise 2011

AR-08 Dr. Chris Hanning, Wind Turbine Noise Sleep and Health (Nov. 2010)

AR-09 Harrison, Disconnect Between Turbine Noise Guidelines and Health
Authority Recommendations

AR-10 Hulme Decision

AR-18 Palmer, A New Explanation for Wind Turbine Whoosh-Wind Shear

AR-19 Pedersen, Wind Turbine Noise Annoyance and Self-Reporting Health

AR-20 Pederson, Health Aspects

AR-22 Rebuttal to AWEA White Paper

AR-28 Salts, Infrasound

AR-29 Salt, Presentation to Rome Conference

AR-30 Shepherd, Wind Turbine Noise Quality of Life

AR-31 Society for Wind Vigilance Analysis HGC Report

AR-34 Wind Turbines and Health, A Rapid Review of the Evidence

AR-38 Hanning, wtm 2011

AR-41 van den Berg, win 2011

AR-42 Moller, Pederson, Low Frequency Noise From Large Wind Turbines

AR-44 Philips, Analysis of the Epidemiology and Related Evidence on the
Health Effects of Wind Turbines in People

AR-103 M. Nissenbaum Rebuttal

AR-105 Exhibit B Noise Assessment Long Term

AR-106 Exhibit C Sound Distance

Ar-108 Exhibit E Vermont Transcript Excerpt

AR-109 Exhibit F Audibility of Low Frequency Wind Turbine Noise

Transcript of the July 7, 2011 rulemaking hearing as posted on the BEP website

2. Report of Richard James dated October 4, 2011.
3. Report of Michael Lawrence dated October 4, 2011.

4. Petitioners' Post-Hearing Comments
5. Petitioners Comments on the Reposted Draft Noise Rule
6. LURC Second Procedural Order in Highland Wind.
7. LURC Third Procedural Order in Highland Wind.
8. USEPA, "Consideration of Cumulative Impacts in EPA Review of NEPA Documents."
9. FIW Certification Amendment dated August 18, 2011.
10. Petitjean, et als, "Wind Turbine Blade Noise Mitigation technology," 4th International Meeting on Wind Turbine Noise (April 2011).
11. M. Nissenbaum, J. Aramini, and C. Hanning, "Adverse health Effects of Industrial Wind Turbines: A Preliminary Report, 10th International Conference of Public Health Problem (2011).
12. Report of McCann Appraisal, LLC for Adams County Illinois, dated June 8, 2010.
13. Wind Turbine Impact Study by Appraisal Group One, dated September 2009.
14. Thorne, The Problems with "Noise Numbers".
15. Bray & James, Dynamic Measures
16. Shepherd, et als., Evaluating the Impact of Wind Turbine Noise.
17. Harrison, Wind Turbine Noise
18. Philips, Properly Interpreting the Epidemiologic Evidence.
19. Krogh, A Summary of New Evidence
20. Noise Bulletin, AM Conditions Approved.
21. Howe, Recent Developments
22. BEP Provisionally Adopted Noise Rule Amendments
23. BEP Supplemental Basis Statement.

